

tarsal joints equal in length with minute tufts of hairs. Length  $1\frac{5}{4}$  inch.

*Hab.* Philippine Islands. One specimen in the British Museum, from the collection of Mr. Cuming.

6. *Atya pilipes*, Newp.

Body smooth; rostrum simple, triangular, very short, with a slight median ridge; fourth and fifth pairs of legs nearly equal; femoral joint with an oblique sulcus on the external surface, fringed with a margin of dense fine hairs. Length  $1\frac{1}{2}$  inch.

*Hab.* Apia, Upolu, New Zealand. One specimen in the British Museum cabinet. I have been unable to derive characters for this species from the third pair of legs, both these being absent.

XX.—*Notes on a Dredging Excursion off the coast of Durham; with descriptions of the Ova-Capsules of Fusus Norvegicus and F. Turtoni.* By Mr. RICHARD HOWSE.

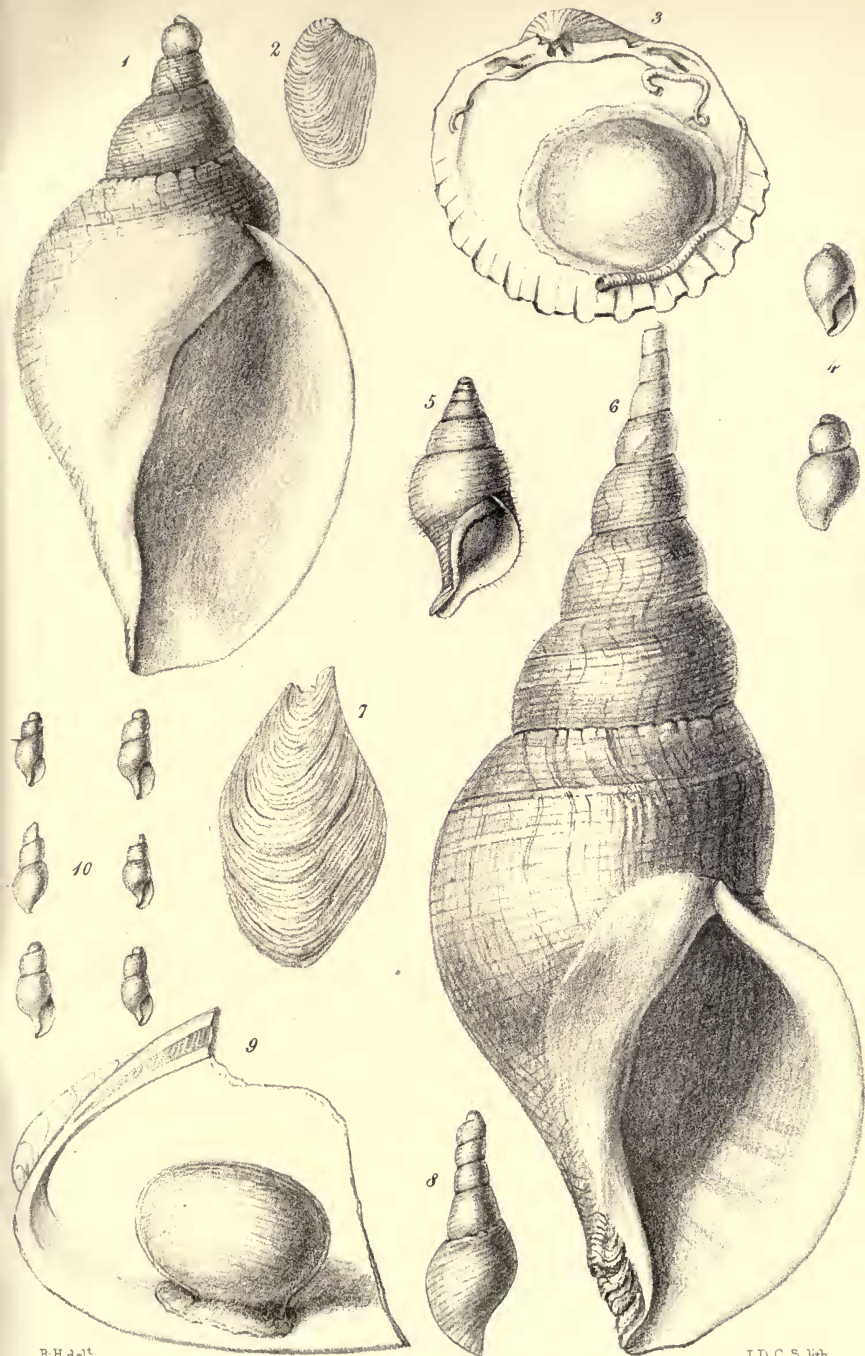
[With a Plate.]

ON the 29th of last June I sailed from Staithes, a fishing hamlet on the Yorkshire coast, in one of the fishing luggers which during the summer months visit the inner or western edge of the Dogger-bank. I made this marine excursion for the purpose of examining the Invertebrata of that much-frequented fishing-ground, and therefore went prepared with a dredge and the other necessary apparatus for collecting.

Unfortunately the weather was most unfavourable, the wind blowing a gale from the west. We were driven about from Monday, the day on which we sailed, till Wednesday morning without being able to use the dredge; during the latter day, however, we had three hauls with it, but had no other opportunity of putting it down. The wind freshening towards evening we were obliged to leave off dredging, and on the following morning steered for the shore, which we reached in the afternoon.

The little dredging we had was in sixty fathoms water, on a fine, gray, sandy bottom, about fifty miles east of the coast of Durham, and about the same distance from the western edge of the Bank. The result, though small, was more satisfactory than under such unfavourable circumstances I had any reason to expect.

The following mollusks were taken: a few specimens each of *Fusus antiquus* and *F. Islandicus*; a beautiful specimen nearly an inch in length of *Fusus Barvicensis*; one of *F. ? lineatus*; speci-





mens of *Buccinum undatum*, *Natica Grænlandica*, *N. Montagui*; several of *Turritella terebra*; one of *Tornatella fasciata*; several of *Dentalium entale*; specimens of *Venus ovata*, *Venus laminosa* and *Psammobia Ferroensis*; *Astarte Damnoniensis* in great abundance—as many as would fill a quart measure were obtained; a few fine specimens of *Astarte Scotica* and *A. compressa*; two of *Kellia suborbicularis*; dozens of *Montacuta substriata* adhering to the spines of *Spatangus purpureus*; one of *Solen pellucidus*; a few of *Cardium echinatum*; two specimens of *Pecten opercularis*, and several valves of *P. obsoleta*. These were all living with the exception of *Natica Grænlandica*, *N. Montagui*, *Psammobia Ferroensis*, *Venus ovata*, *Cardium echinatum* and *Pecten obsoletus*.

From the quantity dredged, the bottom must have been thickly strown with *Spatangus purpureus*—nearly half a peck were brought up the second haul; and when the dredge was taken on board the third and last time, it was pressed almost full of this species, which hitherto has been considered rare on the coast of Durham and Northumberland. Six specimens of another species of *Spatangidae* were also procured at the same time. These most nearly resemble *Bryssus lyrifer*, but are much larger and less compressed than that species. The dorsal lyriiform impression is almost obsolete, and it will probably prove distinct from any recorded British species. Very few starfish were dredged; only two or three specimens each of *Ophiura texturata*, *Ophiocoma rosula*, *Asterias aurantiaca* and *Uraster rubens* were brought up.

As might be expected from the sandy nature of the sea-bottom, the dredging was rather unproductive in zoophytes; only a few were obtained; a beautiful living specimen of *Retepora Beaniana*, and a few dead ones of *Cellepora Skenei* and *C. ramulosa*.

Four specimens of a new and interesting variety of *Fusus Islandicus* were also taken. In general outline this variety is short and tumid, the spire having the appearance of being pushed in. The lower part of the body-whorl is much puffed out, the upper part flattened and folded over at the suture. The canal is very much curved, and more inclined to the left than usual. The chief character, however, is in the epidermis, which is hispid; the hispidations are very fine, and occur at the crossing of the striæ of growth with the spiral striæ. The largest specimen is about  $1\frac{1}{4}$  inch in length and  $\frac{1}{2}$  inch in width, and has seven whorls. Plate X. fig. 5. will give a pretty correct idea of this variety, which from the number obtained, the constancy of form and other characters, must be regarded as permanent.

The most interesting objects, however, that I procured were two ova-capsules of *Fusus Norvegicus*, which I shall describe further on. In this place I very much regret having to state that Mr. Wm. King, Curator of the Newcastle-on-Tyne museum,



has put the result of this dredging excursion in a note on *Retepora Beaniana* (p. 238), and that he has also given notice of the ova-capsules of *F. Norvegicus* in the text of his paper in the 'Annals' of October last. This is the more to be deplored, as his description is partly erroneous and very imperfect. I allowed this gentleman to examine the capsules, but did not for a moment suppose that he would publish an account of them without my consent or knowledge.

In addition to those objects resulting from the dredging excursion, I have obtained several interesting specimens from the coasts of Durham and Northumberland from other sources. From the Haddocks, those indefatigable collectors, I have procured one specimen each of *Neera cuspidata* and *Bulla Cranchii*, and two of *Natica helicöidea*; this is the first time, I believe, that this rare shell has been taken so far south. From the fishermen, less careful and less industrious collectors than the former, I have received fine specimens of *Fusus Turtoni*, *F. Norvegicus*, *F. Barvicensis*, *Trochus millegranus*, the two last fished up off Berwick; two or three specimens of *Natica Grœnlandica* and *Scalaria Trevillyana*; a large single specimen of *Panopæa arctica*, and a single specimen each of *Retepora Beaniana* and *Bryssus lyrifer*. This is the first time the last-mentioned species has been recorded as being taken on the coast of Durham. It is most probably not uncommon, as Mr. A. Hancock informs me that he has procured it from the fishing-boats at Cullercoats.

I have also obtained from the fishermen three ova-capsules of *Fusus Turtoni*. These capsules are exceedingly interesting, as they, together with the capsules of *F. Norvegicus*, prove very clearly the distinctness of these two rare and little-known species, which by some conchologists, I believe, have been considered as mere varieties of *F. antiquus*.

#### *Ova-capsules of Fusus Norvegicus.* Plate X. fig. 3.

The spawn of *F. Norvegicus* was dredged July 1, 1846, in sixty fathoms water as before stated. Only two were taken; they are of a subhemispherical form, about one inch in diameter, and are agglutinated separately by a very thin, produced marginal rim to the inside of old valves of *Cardium echinatum*. The envelope is coriaceous, of a horny appearance, very transparent, smooth, glossy and of a yellowish colour; one of the capsules contained three, the other only two embryos. The last were far advanced, and apparently ready to leave the case. Through the transparent covering when first dredged, I could see them moving about and adhering to the inner surface of the capsule by the expanded foot, the sides of which were of a faint lilac colour. The thin oper-